

WASHINGTON DEPARTMENT OF ECOLOGY
ENVIRONMENTAL ASSESSMENT PROGRAM
FRESHWATER MONITORING UNIT
STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 32B075
STATION NAME: Touchet River at Cummins Road
WATER YEAR: WY 2005
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Introduction

Watershed Description

The Touchet River is the largest tributary of the Walla Walla River in southeastern Washington. Its headwaters lie in the Blue Mountains above the town of Dayton in Columbia County. The main river is formed by the confluence of the North and South Forks.

Land use is primarily agricultural, consisting of dryland crops and irrigated farming in the lower portions.

Spring Chinook, steelhead, and bull trout are present within the watershed.

Gage Location

The gage is located on the left bank, directly upstream of the Cummins Road bridge crossing, one mile north of Touchet, Washington. It is located at river mile 3.0.

Table 1.

Drainage Area (square miles)	780 (USGS)
Latitude (degrees, minutes, seconds)	46° 03' 24" N
Longitude (degrees, minutes, seconds)	118° 40' 03" W

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	80
Median Annual Discharge (cfs)	62
Maximum Daily Mean Discharge (cfs)	849
Minimum Daily Mean Discharge (cfs)	0.90
Maximum Instantaneous Discharge (cfs)	1480
Minimum Instantaneous Discharge (cfs)	0.90
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	189
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	1.40
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	40

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

Peak flow occurred on March 28, 2005, associated with a moderate precipitation event. The lowest flow of the water year occurred in late July 2005.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	1.6
Weighted Rating Error (% of discharge)	10.0
Total Potential Error (% of discharge)	11.6

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	#7		
Period of Ratings	10/1/04 to 9/30/05		
Range of Ratings (cfs)	0.86 to 2570		
No. of Defining Measurements	11.0		
Rating Error (%)	10.0		

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Narrative

One rating was used throughout the water year. Five discharge measurements were taken throughout the water year, ranging from 1.69 to 183 cfs.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	1.23
Maximum Recorded Stage (feet)	6.45
Range of Recorded Stage (feet)	5.22
Number of Un-Reported Days	15
Number of Days Qualified as Estimates	31
Number of Days Qualified as Unreliable Estimates	0

Narrative

The fifteen unreported days were due to ice-impacted data. Twenty of the estimated days were data that was filtered to remove excessive noise. The remaining estimated days were a result of the period following an ice-impacted data set without a verifiable manual primary gage index reading.

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	n/a
Range of Modeled Stage (feet)	n/a
Range of Modeled Discharge (cfs)	n/a
Valid Period for Model	n/a
Model Confidence	n/a

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

Activities Completed

The station vent cap was replaced in July.